

# ***THE CHANDLER WOBBLE***

## **A Primary Cause of Earthquakes, Volcanism and El Niño**

***The constant changing of the poles as the Earth wobbles back and forth slightly in 14-month and 6.5-year cycles is the cause of major seismic and volcanic activity, the El Niño oscillation and the global warming phenomenon.***

**by Michael Wells Mandeville  
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HC01 Box 890A  
Black Canyon City, AZ 85324, USA  
Email: [mwman@earthlink.net](mailto:mwman@earthlink.net)  
Website:  
<http://www.michaelmandeville.com>

### **EIGHT CHARTS WHICH PROVE THAT THE CHANDLER WOBBLE CAUSES EARTHQUAKES, VOLCANISM, EL NIÑO AND GLOBAL WARMING**

**T**he following eight graphs directly correlate and demonstrate that most major tectonic activity including earthquakes as well as volcanism, the El Niño oscillation and the global warming phenomenon are caused by the changing location of the poles as the Earth wobbles back and forth slightly in what is called the *Chandler wobble*. The name for these correlations is *vortex tectonics*.

The exact location of the north and south poles of the Earth's spin axis are constantly changing while the Earth's crust wobbles slightly around and over the poles in the 14-month and 6.5-year cycles of the Chandler wobble. The eight graphs in this storyboard demonstrate that peaks of seismic and volcanic activity come and go in accordance with these rhythms of the Chandler wobble to produce the El Niño oscillation.

The graphs also prove that the total amount of this activity has progressively increased during the last 50 years, while the centre of the Chandler wobble has slowly drifted towards the Great Lakes. It is highly likely that this increase in global volcanism is the cause of global warming.

#### **1. Anomalous Forty+ Year Acceleration of Earthquake and Volcanic Activity**

We begin with two graphs which directly and elegantly confirm the validity of Edgar Cayce's remarkable 1930s predictions that long-range geological changes would occur after 1958 and begin to accelerate in 1998. In an effort to prove or disprove certain comments and predictions made by Cayce, this author undertook a study of the Earth's patterns of tectonic activity during the 20th century.

Since the only data which permitted an examination of the behaviour of the entire Earth were the records of earthquakes and volcanic eruptions, these records were compiled by the author into databases from which two primary summary charts, "Chart 101: Worldwide Trend in Seismic Activity" and "Chart 102: Worldwide Trend in Volcanism" were prepared. Both charts show a dramatic major increase in such activity in a steady, progressive upward trend over a period of at least 40 years. The increase in earthquake and volcanic activity easily seems to be at least fourfold.

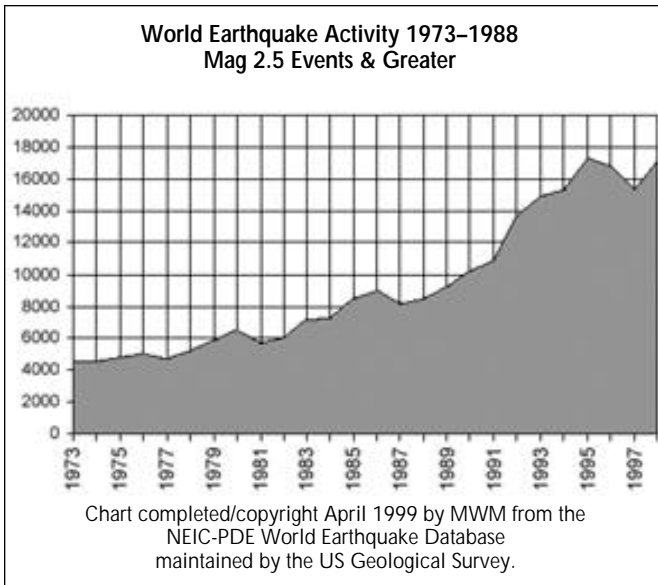
#### **2. Amazing Correlations of the Position and Motions of the Pole with Volcanic and Earthquake Activity**

Cayce claimed in the early 1930s that "cosmic forces" in the solar system created earthquake and volcanic activity. After surveying the geophysics of what might be involved, Mandeville concluded that the likely suspects were the Sun and the Moon, since these were known to produce the Chandler wobble.

The Chandler wobble is a constant bobbing of the Earth as it spirals around in a small circle which takes 14 months to complete. The circling motion varies between about three metres and 15 metres in a spiral which takes 6.5 years on the average.

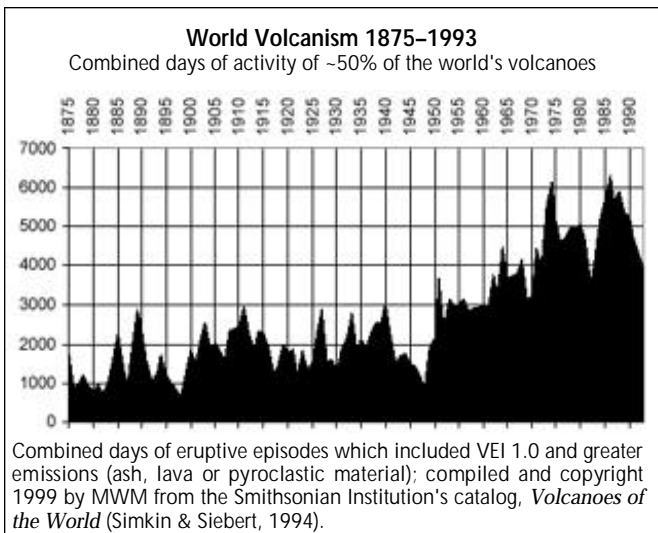
To measure the effect of the Sun and the Moon on earthquake activity, Mandeville first plotted the position of the pole along the X Axis (Greenwich meridian) as the Earth wobbled through its 6.5-year cycle. This created a 6.5-year waveform (called the X Wave in the Primary Axis Cycle). This waveform can then be integrated into charts of annual earthquake and volcanic activity in various regions of the world.

Nearly everywhere, Mandeville found obvious correlations between the position and motion of the pole with increases and decreases in earthquake and volcanic activity.



• **Chart 101: Worldwide Trend in Seismic Activity**

This chart was carefully constructed to provide a consistent data series since 1973 which is statistically valid. It clearly reveals that worldwide seismic activity, defined in this chart as the number of earthquakes of magnitude 2.5 and over, has increased by a fourfold factor.



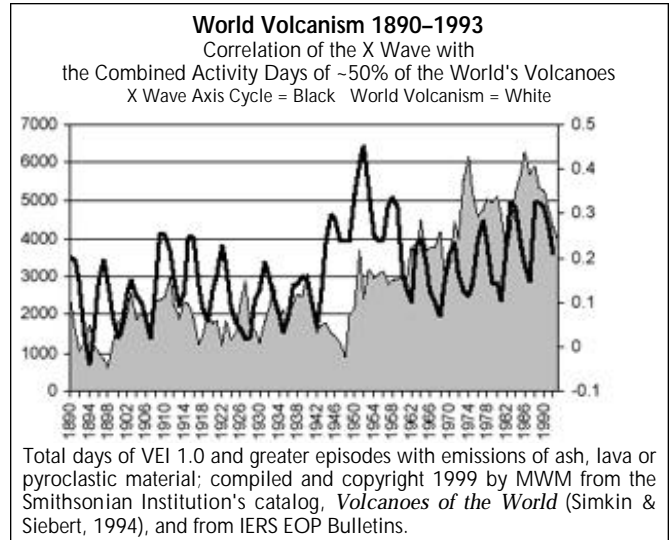
• **Chart 102: Worldwide Trend in Volcanic Activity**

As with chart 101, this chart of world volcanism for the past 125 years was carefully constructed to provide a consistent data series which is statistically valid. Despite the numbers being biased to diminish the likelihood of a trend being seen, chart 102 clearly reveals that worldwide volcanic activity has increased by a fourfold factor.

Since some of the world's most active volcanic zones were excluded from the sample (generally because they are too remote and were not monitored well for most of the century), this graph likely understates the increase in volcanic activity.

Since 1992, which is the cut-off year for this chart, volcanic activity in the volcanoes of this sample has increased to over 15,000 activity days per year and seems to have reached a peak in 1998—the year which Cayce had mentioned some 60 years earlier as when acceleration of the Earth's global activity would begin.

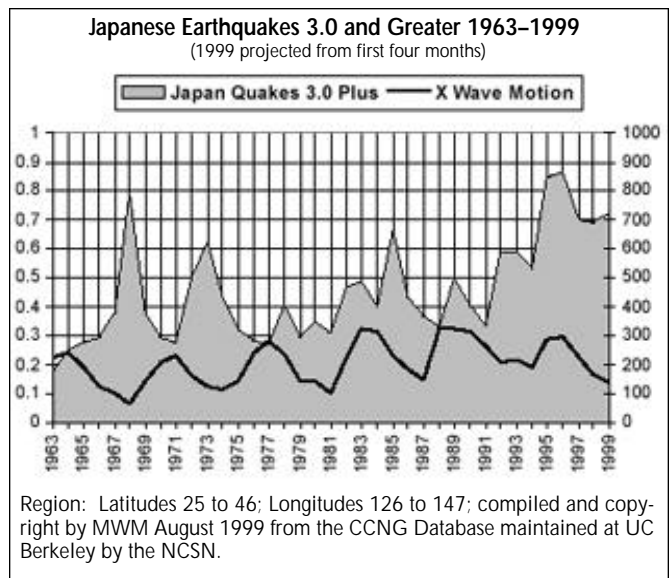
These correlations are sufficiently consistent to conclude that it is the stresses in the Earth's crust which are directly induced by the Chandler wobble, along with additional stresses induced by the Sun and the Moon in various syzygy alignments (as found by many researchers throughout the years), which create the Earth's earthquakes and volcanic activity. This fact, in principle, makes possible the prediction of the most probable "windows" for major seismic activity for any area.



• **Chart 103: Tempo and Rhythm in World Volcanism compared with the X Wave, 1890-1993**

Quite clearly, the rhythm of worldwide volcanic activity directly reflects the tempo of the 6.5-year X Wave.

This same direct correlation can be seen when just the activity in major arcs and groups of volcanoes is charted.



• **Chart 104: Tempo and Rhythm in Japanese Earthquakes compared with the X Wave, 1963-1999**

The same patterns of correlation with the highs and lows of the X Wave also can be seen with earthquakes in every area and window of time.

As can be seen above, seismic activity in Japan tends to peak radically when the X Wave is low every 6.5 years.

Given the immense size of the body of the Earth, the lag times which are probably at work, the great diversity in the type and layering of the outer strata of the Earth and the constantly varying nature of the cycles of the EMS (Earth–Moon–Sun) system, one should not and indeed cannot, as one looks at the evidence, find ultra-simple correlation. But one can find, consistently, fairly clear and reasonably strong patterns of correlation which are easily seen without fancy statistical manipulation and despite any fancy statistical punditry of denial.

• **Chart 105: Tempo and Rhythm in California Earthquakes compared with the X Wave, 1992**

After establishing that Japan's extremely active tectonic environment is highly reflective of the motions of the Earth's crust as it bobs over and around the spin axis, Mandeville decided to zero in on a much smaller time-frame with a much smaller number of earthquakes to see if the same "connection" with the position and location of the pole could be found. Because of the highly accurate and complete record of earthquakes for California, the author studied the outbreak of earthquakes in southern California during 1992 (a year during which the X Wave was low).

Chart 105 zeroes in to find more exactly what the relationship is between southern California's quakes and the motion of the Earth's crust over the spin axis. Normally, the southern California area experiences some 10 to 20 events per week (magnitude 3.0 or more), but most of these are so deep that they are not felt on the surface—and thus do not appear in the news media. In May and June 1992, while the X Motion was at a low, southern California began to experience swarms of up to 100 earthquakes per day.

Chart 105 shows how precisely this activity can be connected to the motion and position of the pole. Notice that when the X Wave is at its very lowest, there is virtually no seismic activity in southern California.

Almost all of the activity in the graph broke out when the position of the pole passed through a certain zone of numbers just prior to reaching the low point or just after it. When the position of the pole began to rise up, back through the same zone of numbers, another outbreak occurred. A similar chart for 1998 shows the same pattern.

• **Chart 106: Tempo and Rhythm of Volcanism in Fiji with the X Wave, 1875–1993**

Since the patterns of correlation were so clear for small samples of earthquakes, the author began to draw charts to compare the activity of small numbers of volcanoes in regional zones with the X Wave.

Since the spreading rift zone of the Fiji–Papua Tectonic Arc is considered by many geologists to be the most active tectonic zone on the surface of the Earth, chart 106 was prepared so as to compare its activity with the X Wave.

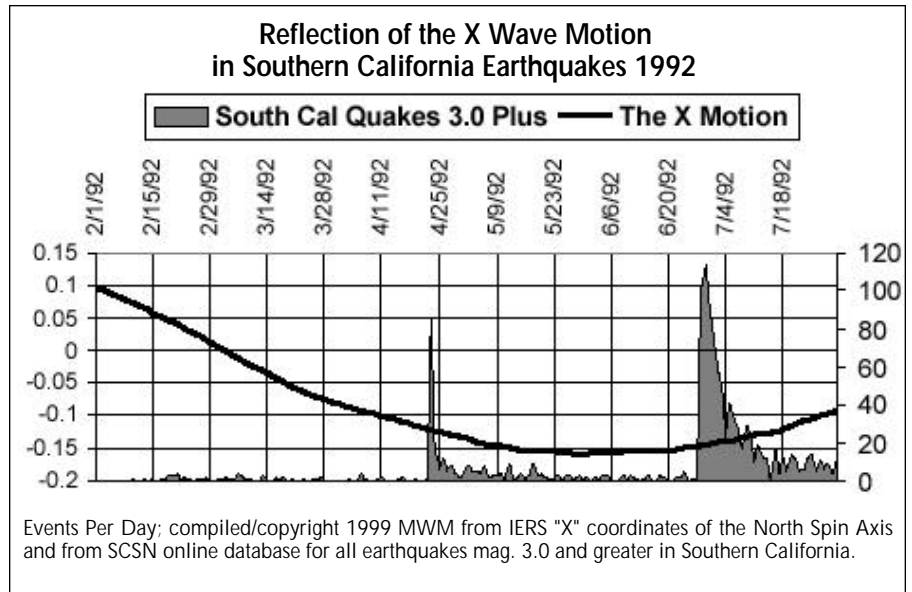
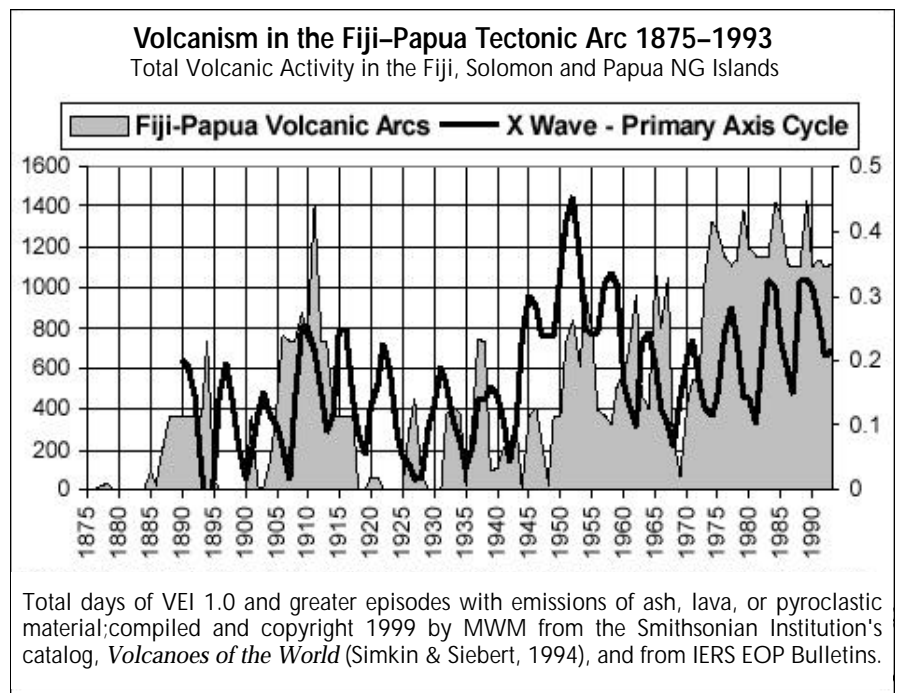


Chart 106 may demonstrate one of the most conclusive pieces of evidence about vortex tectonics. The reflection of the X Wave in the peaks of volcanic activity for the vast arc of South Pacific Islands within the Fiji–Papua Tectonic Arc is in nearly perfect rhythm for a substantial portion of the 20th century. This huge arc of volcanic islands begins in the Tonga Islands, passes through the Fiji Islands and continues westerly to parallel the northern coast of Australia and eventually join with Papua New Guinea on its northern side. The arc is created by the collision of the Australian Plate with the Pacific Ocean Bottom Tectonic Plate, which Australia is overriding.

Amazingly, the frequency of peaks in volcanic activity for this great arc of volcanoes is even more obviously correlated to the X Wave than is the composite of all volcanoes. The pattern of volcanic activity is so similar to the undulations of the X Wave that it appears that sharp pulsations in volcanic activity are directly induced by the wobbling motion of the Earth's crust, just as



apparently major peaks of seismic activity are created in Japan and southern California. No simple, exact relationship in timing exists as with the earthquake correlation, thus the exact connection is somewhat more obscure, but it is impossible to suppose that the similar tempo of the two phenomena are not connected. They are definitely playing the same song on the same sheet of music.

Chart 106 also shows the same trend of increase in volcanic activity as does the composite chart for world volcanism. In fact, the increase is rather dramatic, rising to a high level of activity after 1970. Since 1992, the cut-off date for chart 106, regional volcanic activity in the Fiji–Papua Tectonic Arc has maintained the same high level.

Has underwater volcanism increased as well? Unfortunately, underwater volcanoes are not monitored in a consistent fashion, thus no data series can be created to measure underwater volcanism accurately. This is a severe scientific handicap, because the increase in underwater volcanism is most likely the cause of the global warming phenomenon.

The steady increase in volcanism commenced in the latter half of the 1960s and has continued to climb since then. It is currently at levels at least twice as high as shown in chart 102, while the Arctic summer ice melted for the first time in recorded history. Concern about global warming appeared in the 1970s, and this concern has increased after several years of a major acceleration of volcanic activity to all-time record levels in 2000 and 2001, with much arm-waving about the melting Arctic ice pack.

Scientists debate about whether global warming is occurring, and cannot explain how it is created. Climate specialists cannot find a "theory of climate" to explain or prove it. Some data seem to prove that the ground is heating up, but not the atmosphere. Accordingly, some claim that humans are not to blame, and perhaps cosmic factors are.

Isn't it reasonable to suppose that these are all connected in the same truth? It is highly likely that *all* of the hot air, as it were, as well as the water are connected, as these charts demonstrate, directly to the ground underfoot which is ceaselessly moving at a more rapid rate. Isn't it most likely that underwater volcanism and heat venting has also increased by a large amount, and that this increase in heat venting is causing the heating of the oceans and the various symptoms of global warming in the weather and the biosphere?

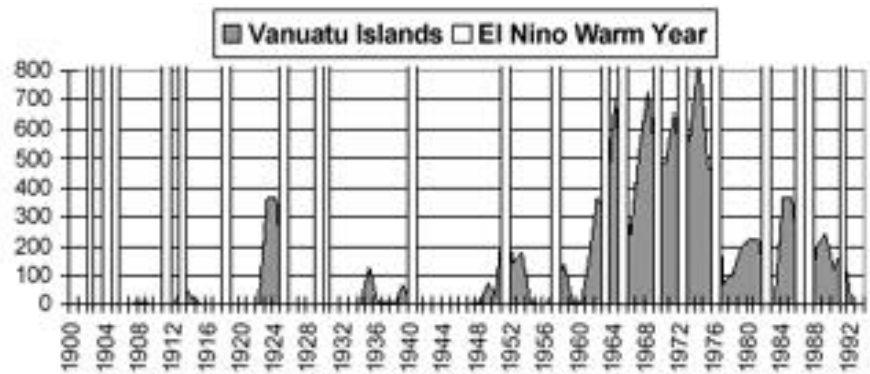
### 3. The Revolutionary X Wave Correlation with El Niño

To add to the complexity of the Fiji–Papua Tectonic Arc, the great Pacific Ocean Rift is spreading very rapidly in the area of the South Pacific Islands of Vanuatu, which is to the west of the Fiji and Tonga Islands and is somewhat north of New Zealand. This spreading rift zone is *the* most active tectonic zone on the Earth. And just a little more to the north of this area, along the equator, the El Niño warm water oscillation forms every few years...

Since there is such a strong, close reflection of the X Wave in this tectonic zone, how can one avoid wondering if there could be any correlation between El Niño and the motions of the Earth's crust?

Two final charts, 107 and 108, demonstrate that the great rifts on the ocean bottom in the South Pacific are the birthing grounds

**Underwater Volcanism Creates El Niño**  
Correlation of Active Days of Volcanism in the Vanuatu Islands with El Niño 1900–1993



Combined Activity Days of Vanuatu's volcanoes; compiled and copyright 1999 by MWM from the Smithsonian Institution's catalog, *Volcanoes of the World* (Simkin & Siebert, 1994), and from NOAA tables of the warm phase of El Niño.

of El Niño, and that collectively the spreading rifts and hot water plumes which rise from them in many places around the Earth must be the birthing grounds of the present regime of global warming.

#### • Chart 107: Correlations of Volcanic Activity with El Niño Years

Chart 107 plots the El Niño years along with the active volcano days for the Vanuatu Islands, which are about as close to the great spreading rift zone in this part of the Pacific as one can get while still standing on solid ground.

Once again, an uncanny correlation in phasing appears. Volcanic activity increases for a couple of years, and El Niño starts. If El Niño is caused by heat released by underwater volcanoes on the Pacific Ocean bottom, exactly this sort of pattern should be observable somewhere. How convenient that the pattern of connection shows as close as you can get to the most active tectonic zone on the bottom of the Pacific Ocean, in the location which is closest to where the warm water begins to accumulate along the equator to produce El Niño. How conveniently random!

The activity of many other volcanic groups in the West Pacific can be plotted and compared with the El Niño years. They all show some of the same connectivity in timing.

#### • Chart 108: Correlations of the X Wave with El Niño

Since volcanic activity in the South Pacific seems correlated at least to some degree with the El Niño years, it is logical to suspect that underwater volcanism could be the source of the increase in the temperatures of the mid-Pacific which is known to cause El Niño.

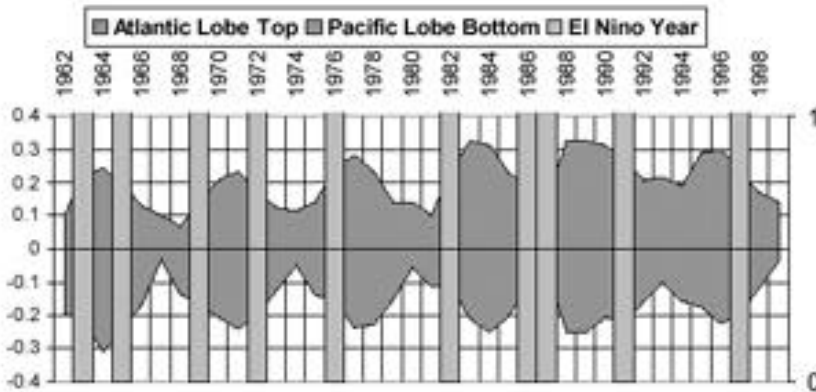
Unfortunately, underwater volcanism is not very well monitored, especially in that part of the world. Consequently, no direct evidence can be found which specifically links the heat vents in the Pacific Ocean bottom with the El Niño.

Nonetheless, these nearby island volcanoes on Vanuatu and Fiji are pretty good smoking guns. The close connection in the pattern between Vanuatu's volcanism and the El Niño years strongly implies that a direct pattern of connection between El Niño years and the X Wave of the Chandler wobble should be seen.

Accordingly, chart 108 was drawn up to plot the El Niño years over the X Wave. In this chart, the full size of the wobble (the

## The X Wave in the 7-Year Primary Axis Cycle 1962–1999

The tectonic energy in these lobes drives earthquakes, volcanoes, the motions of the crust of the Earth and indirectly creates the El Niño weather phenomenon.



Measurements are in arc seconds; plot of the highest and lowest annual positions of the "X" position of the North Spin Axis up and down the Greenwich meridian; compiled/copyright 1999 by MWM from IERS EOP Bulletins (International Earth Rotation Service).

highest and lowest points on the Greenwich meridian) can be seen for each year as it spirals over and up and down the Greenwich meridian. Each El Niño year is plotted in a lighter grey.

The simplicity and clarity of the pattern which is revealed is astounding. Doubtless, the El Niño phenomenon parallels the rhythm of volcanic activity, is directly created by the 6.5-year X Wave, and usually commences at the same cyclical moment in the repeat upswing and downswing of the X Wave. Accordingly, in principle, the El Niño onset periods are predictable simply by plotting and predicting the motions of the Earth's crust as it bobs around to create the small 6.5-year repeating spiral in the location of spin axis, known as the Chandler wobble.

Though not shown here in charts, the current progressive movement of the average location of the spin axis since ~1900 appears to be causing the escalation of earthquake activity and volcanism which is creating the much discussed "global warming"

phenomenon. For unknown reasons, the spiralling motion of the Earth's crust in the Chandler wobble is causing a steady drift of the centre of the spiral in the direction of the Great Lakes. It has moved by some 50 feet since 1900 and this drift has been assumed to be normal. But it may not be normal.

Since about 1950, the spiralling motion of the Earth's crust has been moving down approximately Longitude West 90, completely out of the outer limits of its motions during 1900, and this progressive drift may be forcing the Earth into more aggressive shape-shifting in the tropical zones. The steady increase in tropical shape-shifting may be creating the long-term increase in the amount of earthquake and volcanic activity as shown in charts 101 and 102.

In summary, then, the cosmic factors of the Earth–Moon–Sun system are creating changes in the location and motion of the spin axis sufficiently to force a major new trend in the shape-

shifting of the Earth's crust in the tropical zones. This shape-shifting is pulsed in the frequency of the 6.5-year X Wave, and it has directly induced a huge increase (possibly a fourfold increase) in the release of the Earth's interior heat into the bottoms of the oceans during the past 50 years, most especially in the Pacific. Accordingly, then, the X Wave is causing El Niño, and the progressively accelerating drift or shift in the location of the pole is inducing the release of a steadily increasing amount of heat with each El Niño, thus increasing the severity of each cycle while accumulating as the trend which has come to be known as global warming.

It really is that simple. Unlike all other theories of Earth dynamics and global change, these truths are non-theoretical, are completely free of fancy mathematical sophistry, are strictly observation driven, and can always be found to be consistent with all of the data.

### Resources and References

- For validations and compilations of Edgar Cayce's predictions, see the trilogy, *Return of the Phoenix*, by Michael Wells Mandeville. Sample chapters and information about how to obtain the books can be seen at: <http://www.michaelmandeville.com/phoenix/trilogy/rptrilogyfront.htm>.
- For an overall summary of the geophysical and geological concepts presented on these pages, see "An Outline of the Principles of Vortex Tectonics: The New Paradigm for Earth Dynamics", by M.W. Mandeville, MetaSyn Media, 2000 (11pp), at: [http://www.michaelmandeville.com/polarmotion/Outline\\_Principles\\_Votex\\_Tectonics.pdf](http://www.michaelmandeville.com/polarmotion/Outline_Principles_Votex_Tectonics.pdf).
- For a compilation of correlations which demonstrate and prove the basics of vortex tectonics, see "Vortex Tectonics: The Primary Factors which Govern Earth Dynamics", by M.W. Mandeville, MetaSyn Media, 2000 (36pp), at: [http://www.michaelmandeville.com/polarmotion/Votex\\_Tectonics\\_Equation.pdf](http://www.michaelmandeville.com/polarmotion/Votex_Tectonics_Equation.pdf).
- For ongoing updates related to the current motions of the spin axis and the transformations

which are underway in the Chandler wobble, see the Polar Motion Monitor html website at: [http://www.michaelmandeville.com/polarmotion/polarmotion\\_monitor.htm](http://www.michaelmandeville.com/polarmotion/polarmotion_monitor.htm).

- For a general discussion of the significance of Mandeville's discoveries to the issues related to El Niño weather forecasting and the debate about global warming, see "Press Release: Arizona Scientist Announces Major New Findings to Explain El Niño & Global Warming", at: [http://www.michaelmandeville.com/polarmotion/pr4Oct2000\\_findings.pdf](http://www.michaelmandeville.com/polarmotion/pr4Oct2000_findings.pdf).

### About the Author:

Michael Wells Mandeville served in the Navy for four years as an electronics technician. He studied history, science, economics and psychology at the University of Washington, and in 1972 became a doctoral student in political theory. He then applied his skills for 25 years as an artist and as a consultant in energy technology and small business planning, during which time he broadened himself through spiritual/psychic meditation practices.

By the early 1990s, Mandeville began to follow the cold fusion controversy and proved

in a series of experiments that it was possible to use inexpensive electrochemical means to transmute radioactive elements into inert elements like lead and the catalytic metals.

During the mid-1990s, archaeological and geological discoveries by various researchers inspired him to explore Egyptian prehistory and determine the validity of Edgar Cayce's stories of ancient Egypt. Mandeville assembled a large portfolio of many newly discovered facts which geologists, archaeologists, geophysicists, oceanographers and palaeontologists had discovered during the last 50 years, and found that the new facts painted a "big picture" which tended to corroborate Cayce's stories. In 1994, he began to outline the "big picture" in the *Return of the Phoenix* and did not finish until three volumes were published in 2000.

In the process, Mandeville discovered and proved out his own original theories about the forces which shape the Earth's geology. This discovery, which he named "vortex tectonics", is covered in the paper presented here. For more details, visit Michael Mandeville's website at <http://www.michaelmandeville.com>.